

# Work Order ID 53809

November 18, 2009 12:47:14 PM



Page 1

Item ID:	D3407-041	Accept		Setup	Start	
Revision ID:	E				Stop	
Item Name:	Tow Ring					
Start Date:	18/11/2009	Start Qty: 8.00		Cust Item ID:		
Required Date:	25/11/2009	Req'd Qty: 8.00		Customer:		
Reference:						

Approvals:	Process Plan:		Date:	09/11/18	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	Large Fab	0.00							
	Large Fab								
Large Fab	Memo	0.00							
	Weld D3407-1/-5 using welding rod TIG174 as per Dwg D3407 & QSI 004								
	A/R TIG174 ROD Batch: <u>M109213</u>								
110	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
	QC								
Quality Control	Memo	0.00							
120	QC5- Inspect part completeness to step on W/O	0.00							
	QC								
Quality Control	Memo	0.00							

8/09/11/27 (8x) (PTC)

SCRAP

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3407-041 PAR #: N/A Fault Category: hge Fals. NCR ☒ Yes ☐ No DQA: AS Date: 09.12.08  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: AS Date: 09.12.08

NCR: <u>53809</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
05.11.27	100	Welder accidentally used 304 Rod. on the 17-4 material weld is not 100% compatible Qty 8 parts scrap (cable checked with David. Sh) RC: LOA.	<u>AS</u>	Scrap & destroy. No replace on this w/o. Identify & Give to Eng Insp. Ensure to double check materials to be used prior to plotting.	<u>AS</u> 09/11/30	<u>AS</u> 09.11.30	<u>AS</u> 05.11.27	<u>AS</u> 05.11.27

NOTE: Date & initial all entries

**Work Order ID 53809**

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Page 2

Item ID: D3407-041

Accept



Setup Start



Revision ID: E

Stop



Item Name: Tow Ring

Start Date: 18/11/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 8.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

\*\*Mask Threaded Section\*\*

START TIME: \_\_\_\_\_

OVEN TEMPERATURE: \_\_\_\_\_

FINISH TIME: \_\_\_\_\_

140

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

150

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

**SCRAP**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 53809**

November 18, 2009 12:47:14 PM



Page 3

Item ID: D3407-041

Accept



Setup Start



Revision ID: E

Stop



Item Name: Tow Ring

Start Date: 18/11/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 8.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

**SCRAP**

w 27.11.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 1

November 18, 2009 12:47:20 PM

Work Order ID: 53809



Parent Item: D3407-041RevE



Parent Item Name: Tow Ring

Start Date: 18/11/2009

Required Date: 25/11/2009

Start Qty: 8.00

Required Qty: 8.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3407-1RevE  Stem		Manufactured	No			100	Each	56.0000	8.0000 			

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	56	
52317	25	
52650	9	
52902	22	

8x *SH 09/11/27*

D3407-5RevE

Manufactured No

100

Each

14.0000

8.0000



Ring

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
WA	14	
53452	14	

8x *SH 09/11/27*

**SCRAP**

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	53809
<b>Description:</b> Tow Ring		<b>Part Number:</b>	D3407-1
<b>Inspection Dwg:</b> D3407 <b>Rev:</b> E		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

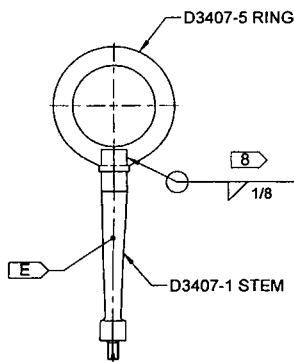
☒ **First Article**
☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010					
1/4-28 UNF	Max: 0.2668 Min: 0.2635					
Major Ø	Max: 0.249 Min: 0.2425					
Ø0.625	+/-0.010					
Ø0.363	+/-0.010					
Ø0.750	+/-0.010					
R0.100	+/-0.010					
0.470	+/-0.010					
0.500	+/-0.010					
3.250	+/-0.010					
4.250	+0.000/-0.010					
5.270	+/-0.010					
0.150	+/-0.010					
0.550	+/-0.010					
0.625	+/-0.010					
0.250	+0.010/-0.000					

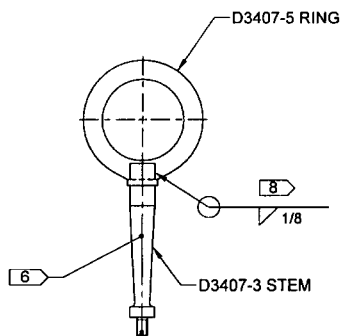
<b>Measured by:</b>	<b>Audited by:</b>	<b>Prototype Approval:</b>	N/A
<b>Date:</b>	<b>Date:</b>	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue	KJ/JLM	
B	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	 

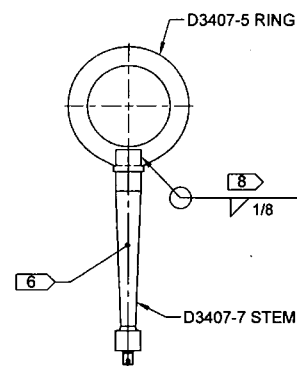
QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM



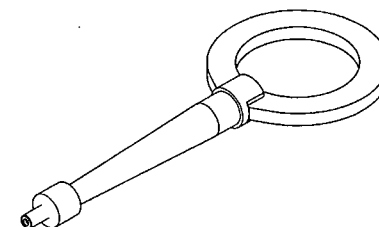
**D3407-041 TOW RING**



**D3407-043 TOW RING**



**D3407-045 TOW RING**

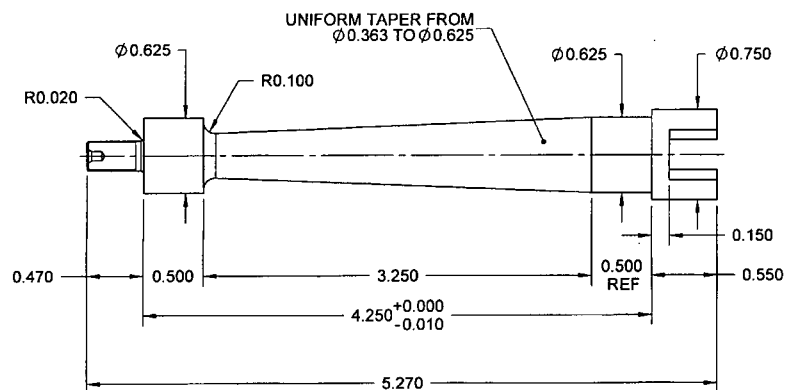
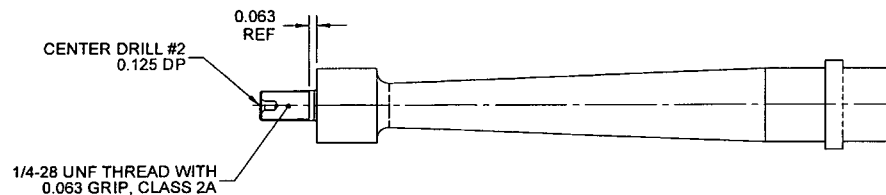


SEARCHED  
INDEXED  
SERIALIZED  
FILED  
UNCLAS  
SUBJ: 10  
NO. 53809  
1009-11-18

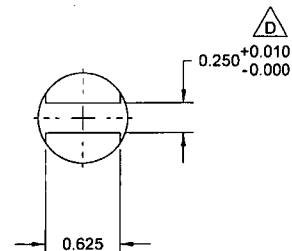
**RELEASED**  
08-08-01/10

- NOTES:**
- 1) MATERIAL: N/A
  - 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
  - 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
  - 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

REV.	DESCRIPTION	BY	DATE
E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.08.17
A	NEW ISSUE	CP	05.03.16
DESIGN	DRAWN	CHECKED	MFG. APPR.
APPROVED	DE APPR.	DATE	08.07.23
<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA DRAWING NO. <b>D3407</b> TITLE <b>TOW RING</b> REV. E SHEET 1 OF 5 SCALE NTS <small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.          THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS          NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT          WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>			



**D3407-1 STEM**

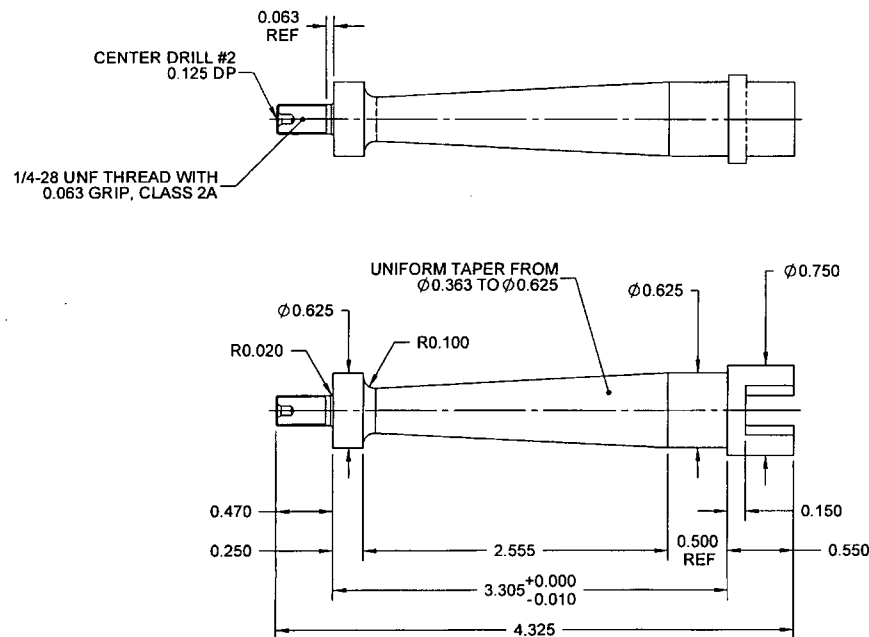


- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.33 lbs

DESIGN		<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA		
DRAWN	<i>HP</i>			
CHECKED	<i>HP</i>		DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>		D3407	SHEET 2 OF 5
APPROVED	<i>[Signature]</i>		TITLE	SCALE
DE APPR.	<i>[Signature]</i>		TOW RING	NTS
DATE	08.07.23		COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

**RELEASED**

W/0 53809



**D3407-3 STEM**

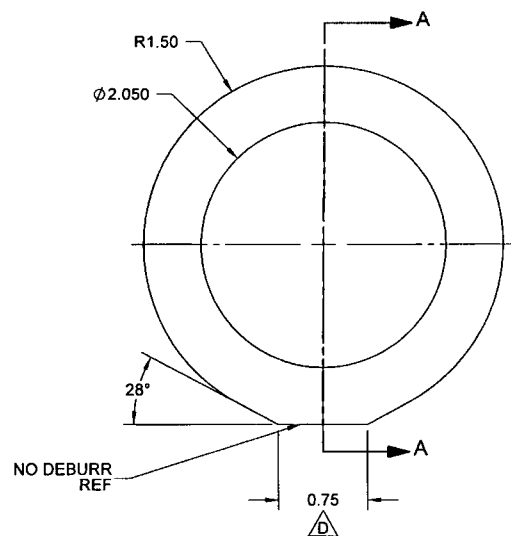
**NOTES:**

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.27 lbs

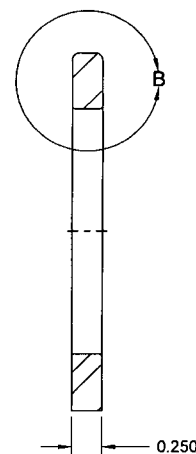
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DRAWN	14	PORT HADLOCK, WA	
CHECKED	14	DRAWING NO.	REV. E
MFG. APPR.	14	D3407	SHEET 3 OF 5
APPROVED	14	TITLE	SCALE
DE APPR.	14	TOW RING	NTS
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**RELEASED**  
07-08-01-118

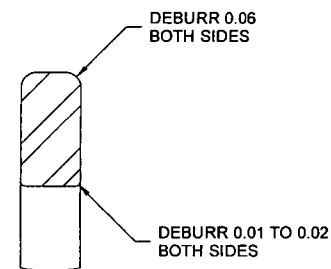
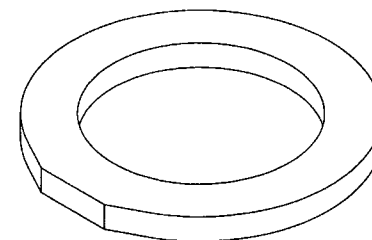
W/0 53809



**D3407-5 RING**



**SECTION A-A**

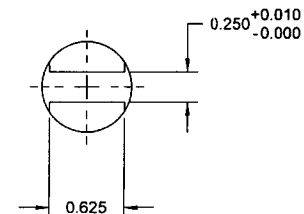
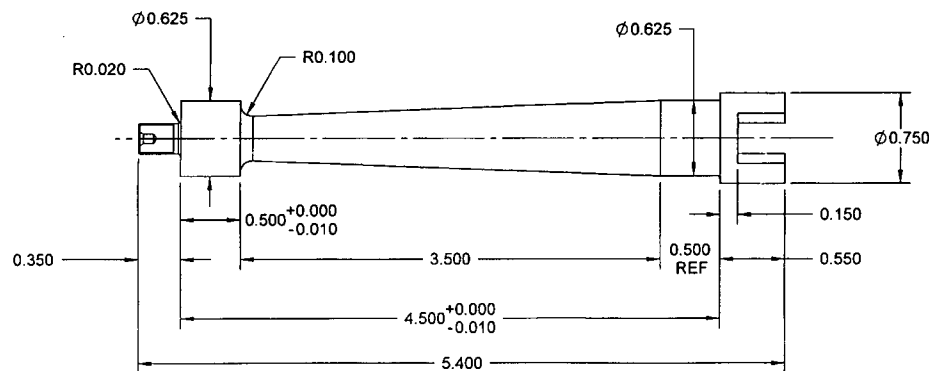
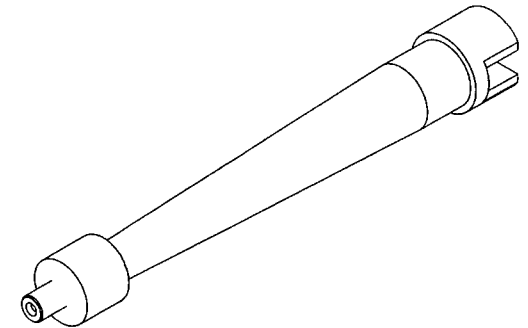
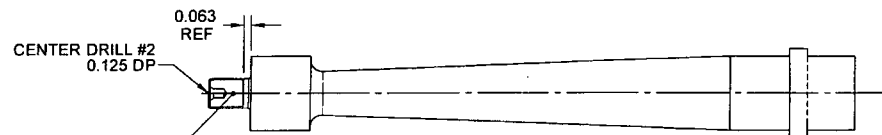


**DETAIL B  
SCALE 2X**

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.27 lbs

DESIGN	92	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA <b>RELEASED</b> <i>W10 53509</i>	
DRAWN	1/18		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.		DRAWING NO.	REV. E
DATE	08.07.23	D3407	SHEET 4 OF 5
		TITLE	SCALE
		TOW RING	NTS

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**D3407-7 STEM**

- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.34 lbs

**RELEASED**

DESIGN	AJS	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	PM	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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